

REF600

Aerodynamic Reference Sound Source

Larson
Davis



Photo of REF600

The Model REF600 Reference Sound Source is an excellent tool for providing accurate and repeatable reference sound levels.

These sources offer extremely flat response over a broad frequency range and are ideal for use in such applications as sound power, sound absorption, and sound insulation measurements.

Features

- Calibrated to ANSI S12.5-1990 and ISO 6926-1990
- Extremely flat frequency response of L_w
- A-weighted Sound Power Level 88.8 dB which will not vary more than 0.5 dBA with voltage variations of up to 10%
- Nominal frequency range 50 Hz to 10kHz
- 1/3rd octave and Directivity Index:
maximum 11.5 dB @ 50 Hz or 8.5 dB @ 63 and 80 Hz 7.0 all other frequencies
- Sturdy, rugged, reliable
 - Heavy-duty vibration isolators on mounts
 - Industrial 1/2 horsepower (373 Watts) motor with long-life ball bearings
 - Full inspection of each unit for proper current, power, and rotation speed.

Applications

- Sound Power Determination per:
 - ANSI S12.31-1990. Precision Methods for the Determination of Sound Power Levels of Broadband Noise Sources in Reverberation Rooms
 - ANSI S12.32-1990. Precision Methods for the Determination of Sound Power Levels of Discrete Frequency and Narrow-Band Sources in Reverberation Rooms
 - ANSI S12.33-1990. Engineering Methods for the Determination of Sound Power Levels of Noise Sources in a Special Reverberation Test Room
 - ANSI S12.34-1988. Engineering Methods for the Determination of Sound Power Levels of Noise Sources for Essentially Free-Field Conditions over a Reflecting Plane.
 - ANSI S12.36-1990. Survey Methods for the Determination of Sound Power Levels of Noise Sources
 - ISO 3741: 1996. Acoustics-Determination of sound power levels of noise sources using sound pressure-Precision methods for reverberation rooms.
 - ISO 3743-1: 1994. Acoustics-Determination of sound power levels of noise sources using sound pressure-Part 1 Comparison method for hard-walled test rooms
 - ISO 3744: 1994. Acoustics-Determination of sound power levels of noise sources using sound pressure Engineering method in an essentially free-field over a reflecting place
 - ISO 3746: 1995. Acoustics-Determination of sound power levels of noise sources using sound pressure Survey method using an enveloping measurement surface over a reflecting plane.
 - ISO 3747: 1987. Acoustics-determination of sound power levels of noise sources using sound pressure-Survey method using a reference sound source
 - ISO 11690: 199xx Recommended practice for the design of low noise workplaces. TR Part 3 Sound propagation and noise prediction in workshops
 - ISO 14257: 19xx Acoustics-Measurements and modeling of spatial sound distribution curves in workrooms in view of the evaluation of the acoustical performance of workrooms
- Qualification tests on Acoustical environments
- Sound absorption determination by the steady-state method
- Sound power determination in-situ
- Also available in 50 Hz, 220V version (REF500)

Example of Test Data¹ (from IBM Laboratories Report 970218R, dated 1997 February 19) Data obtained in National Institute of Standards and Technology Accredited Laboratory in Accordance with ISO 6926-1990 and ANSI S12.5 1990.

1/3 or 1/1 Octave midband frequency (Hz)	1/3 Octave Band sound power level (dB) re: 1pW	1/1 Octave Band sound power level (dB) re: 1pW	Maximum values of 1/3 Octave Band directivity index
25	64.0		N/A
31.5	64.5	69.7	N/A
40	66.1		N/A
50	71.2		11.5
63	75.4	78.5	8.5
80	73.6		8.5
100	75.1		7.0
125	74.8	79.5	7.0
160	74.1		6.0
200	74.9		6.0
250	75.4	80.0	6.5
315	75.5		6.5
400	76.0		6.5
500	76.6	81.7	7.0
630	77.9		7.0
800	79.3		7.0
1000	79.4	84.1	7.0
1250	79.3		5.5
1600	78.0		5.5
2000	78.0	82.379.1	5.5
2500	76.4		5.0
3150	75.7		4.5
4000	74.8	79.5	4.5
5000	74.4		4.5
6300	75.0		4.5
8000	74.8	79.1	4.5
10000	72.9		5.0
12500	71.9		5.0
16000	71.6	76.1	4.5
20000	70.3		4.5
A-weighted sound power level (dB) re: 1pW	88.8	63 – 8 kHz Octave Band mid-frequencies	

1. Test data not obtained in conformance with stated standards from 25 Hz to 40 Hz.

Weight: 30 lbs. (13.6 Kg)

Rotational Speed: 3501 revolutions/min.

60 Hz, 115V



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Larson Davis provides a complete line of acoustic measurement tools including dosimeters, sound level meters, real time analyzers, preamps, calibrators, and microphones